

Title (en)  
SEALING DEVICE

Title (de)  
DICHTUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF D'ÉTANCHÉITÉ

Publication  
**EP 3495638 A1 20190612 (EN)**

Application  
**EP 17836735 A 20170719**

Priority  
• JP 2016151682 A 20160802  
• JP 2017026005 W 20170719

Abstract (en)  
Both shear leakage of oil and pressure leakage due to centrifugal force of oil associated with rotation of a member performing whirling motion are reduced by a surface texture provided on a sliding face of an oil seal member. An oil seal member 15 is provided at an outside surface of a member 5 performing whirling motion such as a rotary engine rotor. A sliding face 15b of the oil seal member 15 that slides relatively to a stationary-side member 3 is provided with a step 15c extending circumferentially, and has a relatively high surface formed on one radial side with respect to the step 15c and a relatively low surface on the other radial side. The high surface is provided with pumping grooves 20 to pump oil tending to leak from the high surface side into the low surface side, into the high surface side by sliding relatively to the stationary-side member 3.

IPC 8 full level  
**F01C 19/12** (2006.01); **F02B 53/00** (2006.01); **F02B 55/02** (2006.01); **F16J 15/34** (2006.01)

CPC (source: EP KR US)  
**F01C 1/22** (2013.01 - EP); **F01C 19/08** (2013.01 - EP US); **F01C 19/12** (2013.01 - EP KR US); **F02B 53/00** (2013.01 - EP KR US); **F02B 55/02** (2013.01 - EP KR US); **F16J 15/34** (2013.01 - EP KR US); **F16J 15/3412** (2013.01 - US); **Y02T 10/12** (2013.01 - EP KR US)

Cited by  
EP4080090A4

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3495638 A1 20190612**; **EP 3495638 A4 20200219**; **EP 3495638 B1 20210106**; CN 109563774 A 20190402; CN 109563774 B 20210112; JP 6796135 B2 20201202; JP WO2018025629 A1 20190530; KR 102203051 B1 20210114; KR 20190034599 A 20190402; US 10954790 B2 20210323; US 2019169988 A1 20190606; WO 2018025629 A1 20180208

DOCDB simple family (application)  
**EP 17836735 A 20170719**; CN 201780044652 A 20170719; JP 2017026005 W 20170719; JP 2018531818 A 20170719; KR 20197005672 A 20170719; US 201716321117 A 20170719